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range of the radio communications over the local radio communication system is less than 100 meters.

41. (New) A method for receiving a radio communication in a radio communication system, the method comprising:

among a plurality of mobile stations, selectively assigning one mobile station of the plurality of mobile stations as a first mobile station for receiving radio communications from the remote radio;

not energizing at least some of the circuitry needed for receiving radio communications from the remote radio in at least one or more of the plurality of mobile stations which are not assigned, while radio communications from the remote radio are being transmitted;

receiving the radio communication from the remote radio at the first mobile station of the plurality of mobile stations; and

transmitting a local radio communication from the first mobile station to an intended recipient mobile station of the plurality of mobile stations.

42. (New) The method of claim 41 wherein the circuitry not energized includes one or more of analog front end circuitry, decoders, and controllers.

REMARKS

The present amendment is in response to the Official Action dated September 5, 2002, wherein the Examiner rejected pending claims 1-39. Claims 1, 4, 9-10, 12-13, 21-23, 28-31 and 38 have been rejected as being anticipated by Heiskari et al., US Patent No. 5,901,342. Claims 2, 7, 24-25 and 32-33 have been rejected as being unpatentable over Heiskari et al., '342, in view of Borrás, US Patent No. 5,133,080. Claims 8, 19, 26 and 37 have been rejected as being unpatentable over Heiskari et al., '342, in view of Mori, US Patent No. 6,330,446. Claims 3, 5-6 and 34-36 have been rejected as being unpatentable over Heiskari et al., '342, in view of Kinnunen et al., US Patent No. 6,023,626. Claim 11 has been rejected as being unpatentable over Heiskari et al., '342, in view of Hershey et al., US Patent No. 5,481,539. Claim 27 has been

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rejected as being unpatentable over Heiskari et al., '342, in view of Mori, '446, and Brown et al., US Patent No. 6,366,622. Claim 39 has been rejected as being unpatentable over Heiskari et al., '342, in view of Brown et al., '622. Claims 18 and 20 have been rejected as being unpatentable over Collyer, US Patent No. 5,915,208, in view of Heiskari et al., '342. Claims 14-17 have been rejected as being unpatentable over Collyer, '208, in view of Heiskari et al., '342, and Mori, '446.

In rejecting the claims the Examiner has largely either relied upon Heiskari et al., '342, and/or Collyer, '208, as well as several other references. However, none of the references cited by the examiner make known or obvious selectively assigning one of a plurality of mobile station, that are each capable of directly receiving radio communications from a remote radio, for receiving radio communications for the plurality of mobile stations, as generally provided by independent claims 1, 14, 18, 26 and 28. Similarly, none of the references make known or obvious not energizing at least some of the circuitry needed for receiving radio communications directly from the remote radio in at least some of the unassigned mobile stations, and/or disabling communications between at least some of the unassigned mobile stations and the remote radio, as generally provided by claims 21 and 41.

Generally, in each of Heiskari et al., '342, and Collyer, '208, the references are directed to a repeater type system, that is intended to extend the communication range of a mobile device to allow the mobile device to communicate with a remote radio that would otherwise be outside of the mobile device's transmission/reception range by relaying the signal through a repeater.

Contrary to the references cited by the examiner, the unassigned mobile stations of the present application are within transmission/reception range of the remote receiver. In at least one embodiment, the communications to the unassigned mobile stations are relayed through an assigned mobile station in order to minimize the activation of circuitry required for communicating directly with the remote receiver, in favor of local communication circuitry, which often has lower power requirements. Furthermore, in at least some methods and systems that are consistent with the present invention, the duplicative decoding of signals from the remote radio by each of the mobile devices may also be avoided.

Neither Heiskari et al., '342, nor Collyer, '208, make known or obvious the relaying of communication signals from a remote radio via an assigned mobile to unassigned mobile

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stations, that are within communicative range with the remote radio. Consequently, neither of the references make known the claims of the present application, as presently amended. The other references cited by the Examiner similarly fail to make known these features. Furthermore any suggestion by the Examiner of a motivation to combine references in an attempt to extend the distance of the communication would similarly be inapplicable, where the mobile stations are already within communication range of the one or more remote radios (i.e. base stations).

Regarding the claim objections, noted by the Examiner, the applicant has made amendments to the noted claims in an attempt to address the identified issues. The applicant has additionally made amendments to the specification, to address other recently discovered informalities of a clerical nature.

The applicant contends that the claims, as presently amended, are allowable over the prior art of record, for the reasons noted above. Allowance of the application is therefore respectfully requested. Should any issues remain unresolved after the consideration of the present response, the Examiner is invited to contact the applicant's representative at the number listed below to discuss the same.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please amend the paragraph beginning at page 1, line 5, as follows:

This application is related to application serial number [xx/xxx,xxx] 09/603,545 entitled Method and Apparatus For Distributing Processing Load For Decoding Paging Messages In A Radio Communication System, Motorola case number CS-10463, filed on even date herewith and commonly assigned to the assignee of the present application.

Please amend the paragraph beginning at page 6, line 1, as follows:

In a typical application such as a cellular telephone or UMTS system, the paging channel is the vehicle for communicating with mobile stations when they are not assigned to a traffic channel. As the name implies, its primary purpose is to convey pages, that is, notifications of incoming calls, to the mobile stations. The paging channel carries the responses to mobile station accesses, both page responses and unsolicited originations. Successful accesses are normally followed by an assignment to a dedicated traffic channel. Once on a traffic channel, signaling traffic between base and mobile can [continued] continue interspersed with the user traffic. Thus, the paging channel in such as system forms an alert communication.

Please amend the paragraph beginning at page 7, line 8, as follows:

The first radio circuit 120 and the second radio circuit 122 together in the illustrated embodiment form a radio means for receiving radio communication. The first radio circuit 120 is configurable for two-way radio communication with one or more remote radios such as base stations 102, 104. The first radio circuit may be so configured by providing operating power and tuning the receiver 126 and the transmitter 132 to appropriate communication frequencies and receiving and transmitting according to the controlling air interface standard.[.] Similarly, the local radio circuit 122 is configurable for low power radio communication with other members of a local group such as the group including mobile stations 108, 110, 112.

Please amend the paragraph beginning at page 10, line 21, as follows:

While FIG. 3 shows the assigned mobile station 304 in the approximate center of the group 300, this is for convenience only. The members of the group 300 may be distributed over any appropriate distance limited only by reliable radio transmission and reception. The members of the group 300 [my] may be in separate rooms or on separate floors of a building.

Please amend the paragraph beginning at page 11, line 3, as follows:

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The first mobile station [302] 304 determines an intended recipient of the downlink radio transmission. This is accomplished, for example, by demodulating and decoding the downlink transmission 302 and reading the data embedded in the downlink 302. The embedded data define a recipient for the downlink 302. The recipient may be defined by an embedded mobile identification number corresponding to the recipient, data in the paging channel or in a voice channel, or by any other suitable method.

Please amend the paragraph beginning at page 12, line 13, as follows:

All but one mobile stations are not the assigned station. As is the case with the assigned mobile station, the non-assigned mobile stations share identification information with other radios of the local group of radios. Subsequently, such a non-assigned radio [receive] receives information about a received paging channel or other downlink transmission intended for the non-assigned radio from the one radio which has been assigned by the local group for receiving paging channels and other downlink transmissions for all radios of the local group.

Please amend the paragraph beginning at page 18, line 9, as follows:

As noted above, acts similar to those shown in FIG. 8 could be taken to identify a mobile station having particular battery characteristics. Assignment of a mobile station having best battery characteristics or specific non-assignment of a mobile station having worst [batter] battery characteristics could be made based on the identification and shared information. The blocks of FIG. 8 can be readily modified by those ordinarily skilled in the art to produce method steps describing this process.

In the Claims:

Claims 1, 4, 7, 15 and 16 have been amended as follows:

1. (Amended) A method for receiving a radio communication in a radio communication system, the method comprising:
among a plurality of mobile stations, selectively assigning one mobile station of the plurality of mobile stations, each of which is capable of receiving radio communications directly from a remote radio, as a first mobile station for receiving radio communications from the remote radio intended for one or more of the plurality of mobile stations;
receiving the radio communication from the remote radio at the first mobile station of the plurality of mobile stations; and
transmitting a local radio communication from the first mobile station to an intended recipient mobile station of the plurality of mobile stations.

[2] 3. (Amended) The method of claim 1 wherein selectively assigning comprises:

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among the plurality of mobile stations, sequentially assigning one mobile station of the plurality of mobile stations as the first mobile station.

8. (Amended) The method of claim 1 further comprising:
decoding data in the radio communication;
identifying an intended recipient in the data; and
when the intended recipient corresponds to a mobile station of the plurality of mobile [station] stations, transmitting the local radio communication from the first mobile station to the intended recipient mobile station.

9. (Amended) The method of claim 8 further comprising:
when the intended recipient does not correspond to a mobile station of the plurality of [radio] mobile stations, discarding the radio communication.

14. (Amended) A mobile station operable in a radio communication system, the mobile station comprising:
a first radio circuit;
a local radio circuit; and
a control circuit operable in conjunction with the first radio circuit to decode a radio communication from a remote radio and operable in conjunction with the local radio circuit to transmit to an intended recipient from one or more of a plurality of mobile stations, located locally relative to the mobile station, a local radio communication in response to the radio communication, when selectively assigned to receive radio communications from the remote radio for the one or more of the plurality of mobile stations, each of which is capable of receiving radio communications directly from the remote radio.

18. (Amended) A portable electronic device comprising:
receiving means for receiving downlink radio transmissions from a remote radio, when selectively assigned to receive radio communications for one or more of a plurality of portable electronic devices; and

local transmitting means for radio communication of data to an associated portable electronic device from the one or more of a plurality of portable electronic devices, each of which is capable of receiving radio communications directly from the remote radio, in response to the downlink radio transmissions.

21. (Amended) A method for operating a mobile radio communication station, the method comprising:
receiving a downlink radio transmission from a remote radio;
determining an intended recipient of the downlink radio transmission; and
when the intended recipient corresponds to an associated mobile station, which is located locally relative to the mobile radio communication station receiving the downlink radio transmission, and which has selectively disabled direct communication with the remote radio, transmitting information about the

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downlink radio transmission to the associated mobile station on a low power local radio link.

26. (Amended) A radio communication method comprising:
 cooperating among a plurality of locally positioned mobile stations, each capable of directly receiving downlink radio transmissions from a remote base station in a radio communication system, to assign one mobile station of the plurality of locally positioned mobile stations to receive downlink radio transmissions from [a] the remote base station [in a radio communication system];
 at the one mobile station,
 receiving a downlink radio communication at the one mobile station in accordance with a first radio communication protocol of the radio communication system,
 decoding the downlink radio communication to identify an intended recipient of the downlink radio communication, and
 when the intended recipient is another station of the plurality of locally positioned mobile stations, transmitting information about the downlink radio communication to the other mobile station using a low-power local radio communication protocol.

28. (Amended) A radio communication method comprising:
 defining a local group of mobile stations in radio communication with one or more remote radios of a radio communication system;
 within the local group, assigning a first mobile station for receiving downlink transmissions from the one or more remote radios;
 subsequently, receiving the downlink transmissions;
 identifying in the downlink transmissions data intended for one or more members of the local group; and
 communicating the data from the first mobile station to the one or more members over a local radio communication system.

29. (Amended) A method comprising:
 wirelessly communicating among a local group of electronic devices within local communication range of the other electronic devices within the local group and within radio communication range of a remote radio;
 receiving at an assigned electronic device a radio transmission from the remote radio;
 at the assigned electronic device, determining one or more intended recipients of the radio transmission;
 when the one or more intended recipients corresponds to a member of the local group other than the assigned electronic device, wirelessly communicating to the member information about the radio transmission.

30. (Amended) The method of claim [28] 29 wherein wirelessly communicating comprises:

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transmitting data from a first member of the local group intended for one or more other members of the local group; and
receiving the data at at least some of the one or more other members of the group.

31. (Amended) The method of claim [28] 29 further comprising:
assigning the assigned electronic device for receiving radio transmissions from the remote radio for all members of the local group.

33. (Amended) The method of claim [33] 32 further comprising:
measuring a reception characteristic at at least some members of the group;
wirelessly communicating information about measured reception characteristics to other members of the group; and
designating the one electronic device as the assigned electronic device based on the measured reception characteristics.

34. (Amended) The method of claim 31 further comprising:
de-assigning the assigned electronic device; and
assigning a next assigned electronic device for receiving the radio transmissions from the remote radio for all members of the local group.

35. (Amended) The method of claim 31 further comprising:
distributing assignment for receiving radio transmissions from the remote radio for all members of the local group among all members of the local group.[.]

36. (Amended) The method of claim 29 further comprising:
distributing assignment for receiving radio transmissions from the remote radio among members of the local group.